CLAIMS:

1. A pneumatic motion platform, comprising:

   a. a deck;

   b. a base;

   c. a plurality of inflatable actuators, each actuator attached to at least one of the deck or base at a predetermined location intermediate the base and the deck, the plurality of inflatable actuators adapted for use as an active motive force with respect to the deck in a plurality of planes;

   d. a plurality of compliant stabilizers disposed intermediate the deck and the base, at least one portion of each stabilizer disposed proximate a predetermined one of the plurality of inflatable actuators;

   e. a fluid controller in fluid communication with the plurality of inflatable actuators; and

   f. a source of fluid in fluid communication with the fluid controller.

2. The pneumatic motion platform of claim 1, wherein the inflatable actuators comprise flexible air spring actuators.

3. The pneumatic motion platform of claim 1, wherein each inflatable actuator further comprises a manifold, the manifold adapted to connect the inflatable actuator to at least one of (a) the deck or (b) the base.

4. The pneumatic motion platform of claim 1, wherein:

   a. the deck is substantially rectilinear; and

   b. one of the plurality of inflatable actuators is disposed proximate each corner of the substantially rectilinear deck.

5. The pneumatic motion platform of claim 1, wherein the fluid controller further comprises:

a. a fluid conduit; and

b. a valve disposed intermediate the fluid conduit and the plurality of inflatable actuators, the valve further adapted to operate at least one of (i) electrically, (ii) hydraulically, or (iii) pneumatically.

6. The pneumatic motion platform of claim 1, wherein the compliant stabilizer further comprises a compliant tie rod tensioner adapted to provide lateral retention, a first end of the compliant tie rod tensioner being attached to the base and a second end of the compliant tie rod tensioner being attached to the deck, at least one of the ends being disposed proximate a predetermined one of the plurality of inflatable actuators.

7. The pneumatic motion platform of claim 6, wherein the compliant tension rod is further adapted to take torque and shear loads, allowing the pneumatic actuators to individually impart vertical motion with respect to the deck.

8. The pneumatic motion platform of claim 1, further comprising a rotator rotatably mounted at least one of (a) intermediate the base or the deck wherein rotation of the rotator causes the deck to move independent of the base or (b) either the base or the deck wherein rotation of the rotator causes the base and the deck to move together.

9. The pneumatic motion platform of claim 8, further comprising a bearing disposed intermediate the deck and the rotator.

10. The pneumatic motion platform of claim 9, wherein the bearing comprises a swivel caster.

11. The pneumatic motion platform of claim 8, further comprising a rotator controller adapted to control rotation of the rotator.

12. An amusement ride vehicle, comprising:

a. a frame;

b. a pneumatic motion platform operatively connected to the frame, the pneumatic motion platform comprising:

i. a deck;

ii. a base;

iii. a plurality of inflatable actuators attached to at least one of the deck or the base at predetermined locations intermediate the deck and the base, the plurality of inflatable actuators adapted for use as an active motive force with respect to the deck;

iv. a plurality of compliant stabilizers disposed intermediate the deck and the base, at least one portion of each compliant stabilizer disposed proximate a predetermined one of the plurality of inflatable actuators; and

v. a fluid controller in fluid communication with the plurality of inflatable actuators;

c. a source of fluid in fluid communication with the fluid controller;

d. a cabin operatively secured to the pneumatic motion platform, the cabin adapted to contain a human being; and

e. a ride controller, operatively in communication with the fluid controller and the rotator controller.

13. The amusement ride vehicle of claim 12, further comprising a rotator, wherein the cabin is operatively connected to at least one of (a) the pneumatic motion platform which is operatively connected to the rotator which is operatively connected to the frame, wherein motion of the rotator causes a concurrent movement of the cabin and pneumatic motion platform or (b) the rotator which is operatively connected to the pneumatic motion platform which is operatively connected to the frame, wherein motion of the rotator causes a concurrent movement of the cabin but not the pneumatic motion platform.

14. The amusement ride vehicle of claim 13, further comprising a motive system attached to the frame, the motive system adapted to move the amusement ride vehicle along a predetermined path.

15. The amusement ride vehicle of claim 14, wherein the motive system further comprises an electrically-powered pinch motor adapted to engage and gain traction upon a rail system, thus guiding the amusement ride vehicle through a pre-determined path.

16. The amusement ride vehicle of claim 12, wherein the cabin further comprises a seat adapted to hold a human being.

17. The amusement ride vehicle of claim 13, wherein the rotator is a turntable adapted to provide continuous rotation in at least one of (i) a clockwise direction relative to a plane defined by the deck or (ii) a counterclockwise direction relative to the plane.

18. The amusement ride vehicle of claim 17, wherein the turntable provides yaw rotation of the cabin.

19. The amusement ride vehicle of claim 12, wherein an inflatable actuator further comprises:

a. a pneumatic air-spring actuator independently proportionally controlled to provide programmable control of cabin motion; and

b. a manifold connected to the pneumatic air-spring actuator, the manifold adapted to connect to a further structure.

20. The amusement ride vehicle of claim 12, wherein the compliant stabilizers further comprise compliant tension rods disposed between the base and the deck, the compliant tension rods adapted to take torque and shear loads and allow the inflatable actuators to individually impart vertical motion between cabin and frame.

21. An amusement ride system, comprising:

a. a track;

b. an amusement ride vehicle adapted to traverse a predetermined portion of the track, the amusement ride vehicle further comprising:

i. a frame;

ii. a pneumatic motion platform operatively connected to the frame, the pneumatic motion platform comprising:

(1) a deck;

(2) a base;

(3) a plurality of inflatable actuators, attached to at least one of the deck or the base at predetermined locations intermediate the deck and the base, the plurality of inflatable actuators adapted for use as an active motive force with respect to the deck;

(4) a plurality of compliant stabilizers disposed intermediate the deck and the base, at least one portion of each compliant stabilizer disposed

proximate a predetermined one of the plurality of inflatable actuators; and

(5) a fluid controller in fluid communication with the plurality of inflatable actuators; and

iii. a source of fluid, operatively in fluid communication with the fluid controller;

iv. a cabin adapted to contain a human being; and

v. a rotator adapted to controllably rotate the cabin;

vi. ;

c. a ride controller, operatively in communication with the fluid controller and the rotator; and

d. a station adapted to accept the amusement ride vehicle and to allow ingress and egress of human beings into and out from the amusement ride vehicle.

22. A method of providing for independent, simultaneous motion of a deck mounted to a base, the motion in three axes, comprising:

a. providing a plurality of inflatable actuators at predetermined locations of a base;

b. attaching each inflatable actuator to a corresponding location of a deck;

c. providing a fluid controller adapted to selectively inflate or deflate each inflatable actuator independent of each other inflatable actuator; and

d. producing pitch, roll, and heave motion of the deck by the combined and relative operation of the plurality of inflatable pneumatic actuators being selectively inflated or deflated.

23. A method of providing for independent, simultaneous motion of a deck mounted to a base of claim 22, further comprising:

a. providing a selectively controllable turntable to the deck; and

b. selectively rotating the turntable to provide yaw.

24. A method of providing an amusement ride system, comprising:

a. providing an amusement ride vehicle, the amusement ride vehicle comprising:

i. a deck;

ii. a passenger seat mounted to the deck;

iii. a lap bar disposed proximate the passenger seat;

iv. a turntable mounted to the deck on a side of the deck opposite a side of the deck on which the passenger seat is mounted;

v. a multiple degree of freedom pneumatic motion base mounted to the turntable;

b. providing a station for ingress and egress of people into and out from the amusement ride vehicle;

c. during guest loading, positioning the lap bar within at least one of (i) a forward wall of the amusement ride vehicle or (ii) a flooring pocket of the amusement ride vehicle;

d. propelling the amusement ride vehicle about a track along a predetermined path under the guidance of a programmable controller; and

e. actuating the motion base under the control of the programmable controller by selectively adding or removing a fluid from at least one inflatable pneumatic actuator positioned at a predetermined portion of the motion base.

25. The method of claim 24, wherein:

a. the inflatable pneumatic actuator is a plurality of inflatable pneumatic actuators, each positioned proximate a separate edge of the motion base;

b. wherein combined and relative operation of the plurality of inflatable pneumatic actuators produces pitch, roll, and heave motion to the amusement ride vehicle and the turntable device provides yaw.